HISTORIC AMERICAN ENGINEERING RECORD

MASTER PROJECT RECORD

MI-1

Michigan Lake Superior Power Company Hydroelectric Plant and Canal.
Portage Street
Sault Ste. Marie
Chippewa County
Michigan

NOTE: THE NUMBERS IN BRACKETS AT THE ENO OF THE CAPTIONS ARE THE NUMBERS USED IN THE ORIGINAL GLASS PLATE NEGATIVE COLLECTION ON FILE IN THE EDISON SAULT ELECTRIC COMPANY COLLECTION.

AN (E) INDICATES THAT THE PRINT WAS MADE FROM AN EDISON SAULT PHOTOGRAPH NOT IN THEIR NEGATIVE CDLLECTION.

AN (M) INDICATES THAT THE NEGATIVE IS IN THE FILES OF MATERNA STUOIO, SAULT STE. MARIE, MICHIGAN.

THE NUMBERS STARRED (*) ON THE CAPTION SHEETS INDICATE THAT NO NEGATIVE WAS MADE OF THESE PRINTS BY OFFICIAL PHOTOGRAPHER J.T. LOWE WHEN HE WAS IN SAULT STE. MARIE.

MI-1-1 Photocopied August 1978.
GENERAL VIEW OF THE ST. MARY'S RAPIDS ANO THE INTERNATIONAL BRIDGE, C. 1910. THE OLD CHANOLER-DUNBAR (GOVERNMENT) HYDRDELECTRIC PLANT IS VISIBLE ON THE LEFT. (573)

MI-1-2 Photocopied August 1978.
OLO TYSON STREET BRIDGE, 1897, CRDSSING THE ABANDONED, PARTIALLY EXCAVATED ST. MARY'S FALLS POWER COMPANY CANAL. ROWS OF PILING DRIVEN IN 1888-89 ARE VISIBLE ON BOTH THE LEFTAND RIGHT HAND SIDE OF THE PHOTO. (6)

MI-1-3 Photocopied August 1978.
OLD CANAL RIGHT-OF-WAY WEST OF COUNTRY CLUB SHOWING PARTIALLY EXCAVATED CANAL. THE EMBANKMENTS ARE VISIBLE ON THE FAR RIGHT AND THE FAR LEFT. (903)

MI-1-4* Photocopied August 1978.
BLOCKHOUSE USED BY CLERGUE AS RESIDENCE ANO HEADQUARTERS AT SAULT STE. MARIE, ONTARIO. IN THE BACKGROUND IS THE SULPHITE MILL. IN THE FOREGROUNO IS CLERGUE'S PET BEAR. SEPTEMBER 29, 1902.

Michigan Lake Superior Plant and Canal - (continued)

MI-1-5* Photocopied August 1978.
FRONT OF A HORRY ROTARY FURNACE, SHOWING INTERIOR ELECTRODES. THE RAW MATERIALS FOR CALCIUM CARBIDE PRODUCTION--LIMESTONE ANO COKE--WERE FED BY HOPPERS PLACED BETWEEN THESE ELECTRODES INTO THE ELECTRIC ARC. THE REMOVABLE PLATES ON THE EXTERNAL CIRCUMFERENCE OF THE HORRY FURNACE ARE SHOWN ON THE FIRST THREE FURNACES. (M)

MI-1-6* Photocopied August 1978.
LINE-UP OF HORRY ROTARY FURNACES ON THE SECOND FLOOR OF THE MICHIGAN LAKE SUPERIOR POWER COMPANY POWER HOUSE. THE HOPPERS WHICH FED THE RAW MATERIALS INTO THE FURNACES ARE SHOWN ABOVE THE FURNACES. AS THE "SPOOL" OF THE FURNACE ROTATED PAST THE ELECTRODES PLATES WERE AOOED TO HOLD THE FINISHED PROOUCT AND THE DESCENDING RAW MATERIALS IN PLACE. THE DIRECTION OF ROTATION OF THE FURNACES SHOWN IN THIS PHOTO IS CLOCKWISE. (M)

MI-1-7* Photocopied August 1978.
REAR VIEW OF A LINE-UP OF HORRY FURNACES AT SAULT STE. MARIE. AS THE "SPOOL" ROTATED AWAY FROM THE ELECTRODES, THE CARBIDE PRODUCED IN THE ELECTRIC ARC WOULO BEGIN TO COOL. AT THE REAR THE COVERING PLATES INSTALLED AFTER THE "SPOOL" HAD PASSED THE ELECTRODES IN FRONT WOULD BE REMOVEO AND THE INGOT OF CALCIUM CARBIDE (VISIBLE IN THE ROTARY FURNACE ON THE FAR RIGHT) WOULD BE REMOVED AND TAKEN ASIDE FOR FURTHER COOLING ANO FOR SEPARATION OF RELATIVELY PURE CARBIDE FROM HALF-REACTED WASTES. (M)

MI-1-8 Photocopied August 1978.
BREAKING CONCRETE BARS, JULY 1898. TESTING MACHINE USED BY VON SCHON IN EXPERIMENTS ON METHODS OF MIXING CONCRETE AND ON CONCRETE AGGREGATES WHICH USED LOCAL MATERIALS. (4)

MI-1-9 Photocopied August 1978.
INTERIOR OF THE GENERATOR ROOM DURING THE COURSE OF CONSTRUCTION SHOWING THE REAR OF THE SEMI-CYLINDRICAL STEEL PLATE BULKHEADS FIRST USED AT THIS PLANT. THE SHAFTS PROJECTING FROM THE BOTTOM OF THE BULKHEADS BELONG TO THE TURBINES. MAY 1, 1902. (234)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-10 Photocopied August 1978.
CLOSE-UP VIEW OF TURBINE SHAFT PENETRATING THE STEEL PLATE BULKHEAD THROUGH A STUFFING BOX AND AND ALSO SHOWING THE CONTROL GATE SHAFT. THIS PARTICULAR UNIT WAS INSTALLED IN 1916. THE ADMISSION OF WATER TO ALL FOUR RUNNERS IN A PENSTOCK UNIT COULD SIMULTANEOUSLY BE CONTROLLED BY THE CONTROL SHAFT ON THE LEFT. (899)

MI-1-11 Photocopied August 1978.
INTAKE LOOKING NORTH AT UPPER INTAKE COFFER DAM, OCTOBER 10, 1900. ONE OF THE HUBBELL COMPANY DREOGES IS AT WORK IN THE CENTER OF THE ILLUSTRATION. THE TIMBER FLOATING AROUNO WAS PROBABLY FOR USE IN THE CONSTRUCTION OF SIDE WALL RETAINING CRIBS. ONE OF THESE IS BEING CONSTRUCTED JUST TO THE LEFT ANO TOWARDS THE VIEWER FROM THE DREDGES. (87)

MI-1-12 Photocopied August 1978.
CHANNELING MACHINES, NOVEMBER 1898. THESE MACHINES BLOCKEO OUT SECTIONS IN THE ROCK CUT IN PREPARATION FOR DRILLING AND BLASTING. (17)

MI-1-13 Photocopied August 1978.
ROCK DRILLING MACHINES, NOVEMBER 23, 1898. THE HOLES DRILLEO BY THESE MACHINES WERE PACKED WITH GUNPOWOER FOR BLASTING. (19)

MI-1-14 Photocopied August 1978.
STEAM SHOVEL, SEPTEMBER 23, 1898. LOADING ONE OF THE FIRST TRAINS OF DUMP CARS IN THE ROCK SECTION. (10)

MI-1-15 Photocopied August 1978.
LOCOMOTIVE CRANE IN THE ROCK CUT, AUGUST 21, 1900. LOAOING OUMP CARS. A STEAM SHOVEL LOADING OUMP CARS IS VISIBLE IN THE LEFT BACKGROUND. (61)

MI-1-16 Photocopied August 1978.
CANAL SECTION I, LOOKING EAST, AUGUST 21, 1900. NOTE THE DUMP TRAIN ENGINES PUSHING THE TRAIN OF DUMP CARS AWAY FROM THE STEAM SHOVEL. (62)

MI-1-17 Photocopied August 1978.
CANAL SECTION II, NEAR ASHMUN STREET, LOOKING WEST, DECEMBER 7, 1900. ONE OF THE CITY'S NEW BRIDGES OVER THE CANAL IS IN THE BACKGROUNO. TEMPORARY OUMP TRACKS, DUMP TRAINS AND DUMP TRAIN LOCOMOTIVES, AND STEAM SHOVELS ARE ALL SHOWN IN OPERATION. (106)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-18 Photocopied August 1978.
SECTIONS I AND II LOOKING EAST, JUNE 20, 1901. THE TEMPORARY INCLINES USED TO TAKE DUMP TRAINS UP OUT OF THE CANAL CUT SHOW UP CLEARLY HERE, AS WELL AS THE RATHER HAZARDOUS NATURE OF THE BANKS. (150)

MI-1-19 Photocopied August 1978.
CANAL SECTION I, LOOKING EAST, 1900, WITH SEVERAL PARTIALLY SUBMERGED STEAM SHOVELS SHOWN IN THE FLOODED CANAL. ONE OF THE TEMPORARY BRIDGES CONSTRUCTED OVER THE CANAL RIGHT-OF-WAY IS VISIBLE IN THE BACKGROUND. (39)

MI-1-20 Photocopied August 1978.
CANAL SECTION III, LOOKING SOUTH, AUGUST OR SEPTEMBER 1900, FOLLOWING A MAJOR BANK SLIDE. SLIDES LIKE THIS ONE WERE FAIRLY FREQUENT FOLLOWING RAIN STORMS BEFORE THE CANAL WALLS WERE TIMBER LINED IN THE EARTH SECTIONS. (64)

MI-1-21 Photocopied August 1978.
VIEW OF THE ROCK CUT, SOUTH SIDE, DECEMBER 31, 1898. THE HARSH SOULT STE. MARIE WINTERS USUALLY CLOSED DOWN EXCAVATION IN THE ROCK SECTION AND SLOWED IT DOWN IN OTHER AREAS. (26)

MI-1-22 Photocopied August 1978.
VIEW OF THE ROCK CUT, SOUTH SIDE, JUNE 22, 1899, SHOWING SOME OF THE FLOODING WHICH PERIODICALLY DELAYED WORK HERE, AS WELL AS THE PROGRESS OF CONSTRUCTION (APPROXIMATELY 1/4 COMPLETED) TO THIS POINT. (32)

MI-1-23 Photocopied August 1978.
SECTION I OR ROCK CUT, LOOKING WEST, APRIL 29, 1901. (139)

MI-1-24 Photcopied August 1978.
SECTION I LOOKING EAST, AUGUST 25, 1901. POWER COMPANY CREWS ARE AT WORK CONSTRUCTING A MASONRY WALL ON THE LEFT SIDE WHERE THE ROCK FALLS WELL BELOW THE PROJECTED WATER LINE. ALREADY COMPLETED MASONRY RETAINING WALLS ARE VISIBLE ALONG THE RIGHT BANK OF THE CANAL. (172)

MI-1-25 Photocopied August 1978.
SECTION I AT FORT STREET ON COMPLETION OF ALL EXCAVATION AND ROCK REPAIR WORK, AUGUST 1, 1902, JUST PRIOR TO THE OPENING OF THE WORKS. THE HEADGATES (MOVEABLE DAM) ARE VISIBLE IN THE DISTANT BACKGROUND. (266)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-26 Photocopied August 1978.
CANAL SECTION II, LOOKING EAST, WINTER, 1900. EXCAVATION WORK IN THE EARTH SECTIONS, UNLIKE THE ROCK SECTION, WAS USUALLY CARRIED ON THROUGH THE WINTER. SOME OF THE PILES DRIVEN IN THE FALL OF 1900 IN AN UNSUCESSFUL ATTEMPT TO PREVENT BANK SLIDES APPEAR AT THE LEFT. (47)

MI-1-27 Photocopied August 1978.
INTAKE AREA LOOKING WEST FROM RAILROAD BRIDGE, DECEMBER 7, 1900, SHOWING PROGRESS OF EXCAVATION IN THAT AREA. (111)

MI-1-28 Photocopied August 1978.
UPPER INTAKE COFFER DAM, OCTOBER 7, 1901. LOGS WERE PLACED ON THE WATER SIDE OF THIS DAM TO COUNTERACT WAVE ACTION AGAINST THE DAM. NOTE THE TIMBER RETAINING WALL ON THE NORTH SIDE OF THE LOWER INTAKE. (185)

MI-1-29 Photocopied August 1978.
LOWER INTAKE RETAINING CRIB, OCTOBER 7, 1901. SIMILAR RETAINING STRUCTURES WERE USED IN THE UPPER INTAKE. (186)

MI-1-30 Photocopied August 1978.
LOWER INTAKE, AUGUST 1, 1902. WATER WAS FIRST AOMITTED FROM THE ST. MARY'S INTO THE CANAL BY DIGGING A CHANNEL THROUGH THE UPPER INTAKE COFFER DAM SHOWN IN THE CENTER A FEW DAYS LATER. THE LAND SHOWN BEHIND THE RETAINING CRIBS ON BOTH SIDES OF THE CANAL WAS RECLAIMED FROM ASHMUN BAY WITH MATERIAL EXCAVATED FROM THE CANAL. (270)

MI-1-31 Photocopied August 1978.
DRIVING PILES ON SLOPE, NORTH SIDE, EARTH SECTION, JANUARY 17, 1901, IN PREPARATION FOR THE INSTALLATION OF THE TIMBER LINING. THE 12 x 12'S FORMING THE BERM OR BULKHEAD ATOP THE LINING IS ALREAOY IN PLACE. CLAY WAS TO BE SLOPED BEHINO THE BERM AND PAVED WITH STONE. (117)

MI-1-32 Photocopied August 1978.
SECTION II, LOOKING EAST, DERRICKS AND PILE DRIVERS, JUNE 30, 1901, PREPARING THE CANAL PRIMS FOR THE TIMBER LINING. (153)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-33 Photocopied August 1978.
LAND SLIDE AND WRECK OF THE MAPLE STREET BRIDGE, LOOKING SOUTH, OCTOBER 16, 1900. (91)

MI-1-34 Photocopied August 1978.
SLOPE, EAST SIDE, TYPICAL SECTION, JANUARY 17, 1901, SHOWING SILL PLACEMENT IN SEMI-ELIPTICAL LINING. THIS WORK WAS CARRIED OUT BY THE COMPANY IN THE WINTER OF 1901 TO DEMONSTRATE THE FEASIBILITY OF THIS FORM OF LINING. (118)

MI-1-35 Photocopied August 1978.
SECTION III, LOOKING NORTHEAST, AUGUST 25, 1901. THE SEMI-ELIPTICAL LINING IS IN THE PROCESS OF BEING INSTALLED. PLACEMENT OF THE SILLS ON THE PILES AND FILLING BETWEEN THE SILLS WITH CLAY OCCUPY CENTER STAGE. SOME TIMBER HAS BEEN PLACED OVER THE SILLS ON THE UPPER PARTS OF THE WALLS AND ON THE BOTTOM IN THE BACKGROUND. (170)

MI-1-36 Photocopied August 1978.
SECTION III, LOOKING SOUTHWEST FROM SPRUCE STREET, JUNE 13, 1902, WITH TIMBER LINING ALMOST COMPLETED. (245)

MI-1-37* Photocopied August 1978.
THE POWER CANAL, AUGUST 1, 1902, JUST PRIOR TO COMPLETION AT THE JUNCTION OF SECTIONS II AND III. THE TRAPEZOIDAL LINING OF SECTION II IS PLAINLY VISIBLE IN THE FOREGROUND. BEHIND THE DUMP TRAIN TRESTLE IN THE CENTER OF THE PICTURE THE SEMI-ELIPTICAL LINING OF SECTION III BEGINS. (262)

MI-1-38* Photocopied August 1978.
THE POWER CANAL AT THE JUNCTION BETWEEN SECTIONS I AND II ON AUGUST 1, 1902. THE RECTANGULAR PRISM OF THE ROCK SECTION (I) AND THE TRAPEZOIDAL PRISM OF SECTION II BOTH SHOW UP VERY CLEARLY. COMPANY CREWS ON THE LEFT HAND WALL ARE COMPLETING SOME SMOOTHING-UP WORK ON THE ROCK SECTION WALL. (265)

MI-1-39* Photocopied August 1978.
CANAL SECTION III AT SPRUCE STREET, AUGUST 1, 1902, JUST PRIOR TO OPENING THE HYDROELECTRIC PLANT. THE UNCOMPLETED ROOF OF THE POWER HOUSE CAN BE SEEN IN THE BACKGROUND . (267)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-40* Photocopied August 1978.
EXCAVATION IN THE FOREBAY, VIEW LOOKING WEST, MARCH 31, 1899. THE EQUIPMENT USED IN THIS AREA WAS MAINLY MAN-OR HORSE-POWERED SINCE SOIL CONDITIONS HERE (NEAR THE RIVER) WERE TOO SOFT TO PERMIT HEAVY EQUIPMENT. (28)

MI-1-41 Photocopied August 1978.
FOREBAY LOOKING SOUTHEAST, C. MAY 1, 1902. ICE RACK CONSTRUCTION HAS BEGUN NEAR THE CENTER OF THIS PHOTO. THE EMBANKMENT LINING WORK HAS BEEN ALMOST COMPLETED. NOTE THAT THE FOREBAY FLOOR ITSELF IS NOT BEING PLANKED. (232)

MI-1-42 Photocopied August 1978.
CANAL FOREBAY ICE AND TRASH RACK, OCTOBER 1902. (286)

MI-1-43 Photocopied August 1978.
ICE RACK, VIEW FROM UPSTREAM, OCTOBER 9, 1902. NOTE TIMBERED FLOOR ABOVE RACK, THE UNTIMBERED FLOOR TO THE REAR. (284)

MI-1-44 Photocopied August 1978.
DREDGES WORKING AT POWER HOUSE LOCATION, DECEMBER 10, 1898. BY SPECIAL AGREEMENT, CONTRACTORS MASON & HODGE WERE PERMITTED TO BEGIN EXCAVATION OVER THE POWER HOUSE LOCATION WITH DREDGES, COMPLETING THE WORK LATER BEHIND THE COFFER DAM BEING CONSTRUCTED ON THE FAR RIGHT SIDE OF THE PICTURE. (21)

MI-1-45 Photocopied August 1978.
PILE DRIVER, NOVEMBER 2, 1898. THIS MACHINE WAS USED TO DRIVE PILES FOR THE POWER HOUSE COFFER DAM. AT THIS POINT IT IS JUST BEGINNING WORK. (12)

MI-1-46 Photocopied August 1978.
PILE DRIVERS #1 and #2, HOUSED FOR WINTER WORK, AT COMPLETION OF PILE DRIVING FOR COFFER DAM OF POWER HOUSE, APRIL 1, 1899. SOME OF THE TRIPLE -LAP SHEET PILES USED IN THE DAM ARE SHOWN IN THE FOREGROUND. (29)

(continued)

Michigan Lake Superior Plant and Canal -(continued)

MI-1-47 COFFER OAM BEHINO POWER HOUSE SITE AT COMPLETION VIEW LOOKING NORTHWEST, OCTOBER 14, 1899. THE POWER HOUSE FOUNOATION WAS TO BE PLACED JUST TO TNIS SIDE OF THE COFFER OAM AFTER THE AREA HAD BEEN PUMPED DRY ANO EXCAVATEO. THE ST. MARY'S RIVER AND SAULT STE. MARIE, ONTARIO, ARE IN THE BACKGROUND. (35)
Photocopied August 1978.

MI-1-48 Photocopied August 1978.
DRIVING PILES FOR THE POWER HOUSE FOUNOATION, WEST END, AROUNO SEPTEMBER 1, 1900. THE COFFER DAM HOLDING BACK THE ST. MARY'S IS AT THE LEFT. PILES SAWEO TO LEVEL ARE ON THE LOWER RIGHT-HAND SIDE OF THE PHOTO. UNCUT PILES ARE AT THE CENTER. A SECONO PILE DRIVER WORKING FROM THE EAST END CAN BE SEEN IN THE BACKGROUNO, ALONG WITH THE PUMPING PLANT AND THE STONE CRUSHING MACHINE. (71)

MI-1-49 Photocopied August 1978.
EAST END OF THE POWER HOUSE FOUNDATION, LOOKING WEST, C. SEPTEMBER 1, 1900. THE OERRICK IN THE CENTER IS ASSISTING THE PLACEMENT OF THE TIMBER GRILLAGE OVER THE FOUNDATION PILES. THE AREA IN THE FOREGROUND HAS ALREAOY BEEN CONCRETED. THE COFFER DAM AND THE RIVER ARE ON THE RIGHT. (72)

MI-1-50 Photocopied August 1978.
FOREBAY ROCK CRUSHER (RIGHT) AND PUMPING PLANT USEO TO KEEP AREA BEHIND POWER HOUSE COFFER OAM DRY, 190D. (50)

MI-1-51 Photocopied August 1978.
PRE-MOULOED TONGUE ANO GROOVE CONCRETE BLOCKS FOR TAIL RACE AND FOREBAY WALLS AND THE CONCRETE MIXER IN MID-1900. (7D)

MI-1-52 Photocopied August 1978.
LAYING THE CORNER STONE (FIRST PRE-MOULDED CONCRETE BLOCK) OF THE POWER HOUSE, SEPTEMBER 10, 1900. THE BLOCK IS BEING PLACEO ON ONE OF THE MONOLITHIC TAIL RACE (TAIL PIT) BASES. VON SCHON MAY BE THE THIRO PERSON FROM THE RIGHT IN THE CENTER OF THE PICTURE (IN THE GRAY SUIT).

MI-1-53 Photocopied August 1978.
OERRICKS ANO GENERAL VIEW OF PIT WALLS, POWER HOUSE, NOVEMBER 7, 190D. THE MONOLITHIC BASES OF THESE WALLS PRIOR TO THE ERECTION OF THE PRE-MOULDEO BLOCKS APPEAR TO THE RIGHT. ASSEMBLEO WALLS ARE ON THE LEFT. NOTE THAT THE MONOLITHIC FLOORS FOR THE TAIL PITS HAVE BEEN POURED IN THE FIVE RACES ON THE RIGHT, BUT NOT IN THE THREE CLOSEST TO THE ALREAOY-ASSEMBLED WALLS. (103)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-54* Photocopied August 1978.
INTERIOR OF A TAIL PIT OR TAIL RACE AT THE EAST END OF THE POWER HOUSE, SEPTEMBER 17, 1900. THE PRE-MOULDED BLOCKS WHICH FORMED THE SIDE WALLS AND THE ARCHED FOREBAY WALL ARE CLEARLY VISIBLE. THE MONOLITHIC FLOOR OF THE TAIL PIT, HOWEVER, HAS NOT YET BEEN POURED: NEITHER HAS THE MONOLITHIC ARCHED ROOF. (75)

MI-1-55 Photocopied August 1978.
POWER HOUSE LOOKING EAST, MAY 25, 1901, WITH SUB-STRUCTURE CONSTRUCTION NEARING COMPLETION. (139)

MI-1-56 Photocopied August 1978.
POWER HOUSE SUPER-STRUCTURE CONSTRUCTION, LOOKING NORTH, JUNE 18, 1901. THE STEEL WORK FOR A NUMBER OF THE PENSTOCKS HAS BEEN PLACED. SOME OF THE PEDESTALS FOR SUPPORTING THE TURBINE SHAFTS ARE VISIBLE IN THE PENSTOCKS ON THE FAR RIGHT. (148)

MI-1-57 Photocopied August 1978.
POWER HOUSE MASONRY WALLS, NORTH FRONT, JULY 26, 1901. THE COMPLETED TAIL RACE EXITS ARE JUST BELOW THE RISING MASONRY WALL. THE COFFER DAM IS ON THE EXTREME RIGHT HAND PORTION OF THE PHOTOGRAPH. (161)

MI-1-58 Photocopied August 1978.
POWER HOUSE FROM COAL TIPPLE, SEPTEMBER 26, 1901. NOTE WORK ON THE FOREBAY EMBANKMENT IN THE AREA IN FRONT OF THE POWER HOUSE: THE COFFER DAM IS IMMEDIATELY BEHIND THE POWER HOUSE. (182)

MI-1-59 Photocopied August 1978.
POWER HOUSE FROM WEST BANK OF FOREBAY, SEPTEMBER 11, 1901. AT THIS POINT MOST OF THE PENSTOCK STEELWORK WAS WAS COMPLETED. THE PENSTOCK WALLS ON THE RIGHT SIDE OF THE PHOTO HAVE BEEN COMPLETED. THE DUMP TRAIN IS PILING CLAY AGAINST THE FOREBAY WALL IN PREPARATION FOR THE CONSTRUCTION OF THE FOREBAY APRON. A SMALL PILE DRIVER IS DRIVING PILES FOR THIS STRUCTURE. (179)

MI-1-60 Photocopied August 1978.
CONSTRUCTING THE "CARBIDE" OR SECOND FLOOR OF THE POWER HOUSE, LOOKING EAST, AROUND MAY OR JUNE OF 1902. NOTE INSTALLATION OF FOREBAY APRON IN FRONT OF THE POWER HOUSE. (235)

MI-1-61 Photocopied August 1978.
WEST END OF POWER HOUSE, JULY 1902. BY THIS POINT THE SUPER-STRUCTURE WAS LARGELY COMPLETE EXCEPT FOR SOME INTERNAL CONCRETE FLOOR POURING AND THE ROOFING. (257)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-62 Photocopied August 1978.
"CARBIDE" OR SECOND FLOOR LOOKING EAST FROM WEST END, OCTOBER 29, 1902. THE STAIRS TO THE POWER COMPANY'S SUPPLEMENTAL THIRD FLOOR APPEARS AT THE RIGHT; THE HOLLOW TILES WHICH FORMED THIS FLOOR AT THE TOP. (435)

MI-1-63 Photocopied August 1978.
TESTING TURBINES AT HOLYOKE. INSTALLING A PAIR OF THE JOLLY-McCORMICK RUNNERS AND CONTROL GATES IN THE TEST PIT. (343)

MI-1-64 Photocopied August 1978.
POWER HOUSE PENSTOCKS AND TURBINES, OCTOBER 5, 1901. THE CLAY FOR THE FOREBAY APRON AND ONE OF ITS LONGITUDINAL SILLS ARE SHOWN IN PLACE AS WELL. (183)

MI-1-65 Photocopied August 1978.
ENDS OF PENSTOCKS, SEPTEMBER 1, 1902, WITH THE WEBSTER, CAMP, AND LATE (JOLLY-McCORMICK) TURBINES IN PLACE AND THE FOREBAY FLOOR PARTIALLY FLOODED. (276)

MI-1-66 Photocopied August 1978.
VIEW OF THE WINTER HOUSING AT THE MOVABLE DAM (HEADGATES) LOOKING EAST, FEBRUARY 5, 1902. COMPLETE ENCLOSURE OF THE CONSTRUCTION SITE WAS USED AT BOTH THE HEADGATES AND THE COMPENSATING GATES TO ALLOW CONTINUATION OF CONCRETE WORK THROUGH THE WINTER OF 1901-1902. (203)

MI-1-67 Photocopied August 1978.
PIERS AND FALSEWORK FOR ARCHES OF THE HEADGATES, APRIL 17, 1902. THE ARCHES WERE FOR A ROADWAY ACROSS THE REAR OF THE HEADGATE PIERS. (227)

MI-1-68 Photocopied August 1978.
ONE OF THE HEADGATES (OR ONE OF THE GATES OF THE MOVABLE DAM), OCTOBER 16, 1902, VIEW FROM THE UPSTREAM END. (291)

MI-1-69 Photocopied August 1978.
VIEW OF THE HEADGATES LOOKING WEST AT THE TIME OF THE 1910 SHUTDOWN. THE CONCRETE ARCHES LINKING THE PIERS OF THIS STRUCTURE WERE DESIGNED TO SUSTAIN RAILROAD LOADING FOR A CONTEMPLATED (BUT NEVER CONSTRUCTED) SECOND INTERNATIONAL RAILROAD BRIDGE AT SAULT STE. MARIE. (805)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-70 Photocopied August 1978.
BIRDSEYE VIEW OF COMPENSATING GATES CONSTRUCTION SITE FROM THE CANADIAN CANAL, SEPTEMBER 24, 1901. THE VIEW SHOWS THE INTERNATIONAL RAILROAD BRIDGE AND THE BEGINNINGS OF BREAKWATER CONSTRUCTION FOR THE FIRST FOUR COMPENSATING GATES. (309)

MI-1-71 Photocopied August 1978.
THE COMPENSATING GATES SITE, SEPTEMBER 24, 1901, LOOKING NORTHEAST WITH THE COFFER DAM IN PLACE. THE BREAKWATER CAN BE SEEN ON THE FAR LEFT. (311)

MI-1-72 Photocopied August 1978.
VIEW OF THE COMPENSATING GATES FROM THE INTERNATIONAL BRIDGE AFTER COMPLETION, BUT BEFORE THE REMOVAL OF ANY OF THE COFFER DAM CRIBS (ONE OF WHICH IS VISIBLE IN THE LOWER PART OF THE PHOTO). (337)

MI-1-73* Photocopied August 1978.
THE FIRST FOUR COMPENSATING GATES IN 1902. NOTE THE BREAKWATER AND THE UPSTREAM PORTION OF THE COFFER DAM STILL IN PLACE. THESE WERE NOT REMOVED UNTIL 1911. (570)

MI-1-74 Photocopied August 1978.
ELECTRICAL INSTALLATION LOOKING WEST, JANUARY 1903. THE BELT-DRIVEN EXCITER FOR THE SINGLE PHASE WESTINGHOUSE ALTERNATOR ORDERED BY THE POWER COMPANY IS IN THE FOREGROUND, THE WESTINGHOUSE ALTERNATOR IS THE FIRST IN THE ROW TO THE LEFT. THE TEMPORARY SWITCHBOARD IS JUST TO THE LEFT OF THE LINE OF COLUMNS AT THE RIGHT. (414)

MI-1-75 Photocopied August 1978.
ELECTRICAL INSTALLATION IN PROCESS OF ERECTION, NOVEMBER 1902. A SECTION OF A STATIONARY ARMATURE RING IS AT THE LEFT FOREGROUND; THE ROTARY FIELD COILS ARE IN THE BACKGROUND. (344)

MI-1-76 Photocopied August 1978.
STANLEY ROTARY CONVERTER, PENSTOCK NO. 41, WITH SOME OF THE STANLEY TRANSFORMERS IN THE BACKGROUND. (442)

MI-1-77 Photocopied August 1978.
THOMAS' TEMPORARY SWITCHBOARD, NOVEMBER 1902. FRONT VIEW. (348)

MI-1-78 Photocopied August 1978.
THOMAS' TEMPORARY SWITCHBOARD, NOVEMBER 1902. REAR VIEW. (445)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-79 Photocopied August 1978.
ELECTRICAL INSTALLATION LOOKING EAST, JANUARY 1, 1903, SHOWING ONE OF THE STANLEY D.C. GENERATORS IN THE CENTER FOREGROUND, AND, IN THE BACKGROUND, A ROW OF STANLEY THREE-PHASE ALTERNATORS. THE SWITCHBOARD WAS LATER PLACED ON A GALLERY WHICH PROJECTED OVER THIS LINE OF GENERATORS. (449)

MI-1-80 Photocopied August 1978.
VIEW OF THE POWER HOUSE FROM PORTAGE AVENUE ON GRAND OPENING DAY, OCTOBER 25, 1902. THE PUMP HOUSE ON THE WEST END OF THE POWER HOUSE WAS STILL INCOMPLETE AT THIS TIME. (407)

MI-1-81 Photocopied August 1978.
"CARBIDE" OR SECOND FLOOR LOOKING WEST, OCTOBER 24, 1902. THE TABLES ARE SET IN PREPARATION FOR THE GRAND OPENING CELEBRATION WHICH WAS HELD, IN PART, IN THE QUARTER-MILE LONG ROOM. (438)

MI-1-82 Photocopied August 1978.
PREPARATIONS FOR REPAIRING A FOREBAY LEAK IN 1907, VIEW FROM FOREBAY. THE SILLS OF THE FOREBAY APRON WHICH HAD CRACKED AND SAGGED ARE CLEARLY VISIBLE IN THE CENTER OF THE PHOTOGRAPH. NOTE ALSO THE PENSTOCK GATE SECTION AND THE TRAVELLING GATE HOIST ABOVE THE DAMAGED AREA. THIS WAS THE MEANS USED FOR SHUTTING OFF INDIVIDUAL PENSTOCKS PRIOR TO C. 1920. THREE OF THE SECTIONS (WOODEN) SHOWN WERE REQUIRED TO CLOSE OFF A PENSTOCK. THE TRAVELLING HOIST WAS MANUALLY OPERATED. (511)

MI-1-83 Photocopied August 1978.
CLOSE-UP VIEW OF FOREBAY APRON, SHOWING WASHED-OUT AREA BENEATH IT, 1907. (515)

MI-1-84 Photocopied August 1978.
REPAIRING FOREBAY LEAK, NOVEMBER 1907. THE PILE-DRIVER IS DRIVING NEW PILES FOR THE FOREBAY APRON, CLAY BACK-FILL AND PLANKING CREWS ARE BUSY AT THE RIGHT. MUCH OF THE FOREBAY FLOOR WAS ALSO REPLANKED AT THIS TIME. (520)

MI-1-85* Photocopied August 1978.
WATER BUBBLING UP AT THE REAR OF THE POWER HOUSE IN EITHER 1907 OR 1909. THE BUBBLING IMMEDIATELY IN FRONT OF THE SHEET PILING (DRIVEN IN 1903) WAS CAUSED BY WATER LEAKING UNDER PRESSURE FROM THE FOREBAY, BENEATH THE POWER HOUSE FOUNDATIONS, AND INTO THE ST. MARY'S RIVER. (525?)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-86 Photocopied August 1978.
CLAY RAMMING EQUIPMENT IN OPERATION IN THE POWER HOUSE IN 1910. A PILE OF CLAY USED TO FILL THE WASHED-OUT AREAS BENEATH THE FOUNDATIONS IS SHOWN IN THE CENTER OF THE ILLUSTRATION BESIDE THE FILLER PIPE. THE WEIGHT USED TO FORCE THE CLAY DOWN UNDER THE FOUNDATIONS IS SHOWN PRESSING ON THE PLUNGER PIPE. (542)

MI-1-87 Photocopied August 1978.
RECONSTRUCTION OF SEGMENTS OF THE PENSTOCK FLOOR DURING THE 1910 WASHOUT REPAIRS. CLAY BACKFILL CREWS AND PLANKING CREWS ARE ALSO AT WORK ON THE FOREBAY APRON. (539)

MI-1-88 Photocopied August 1978.
STATION GENERATORS LOOKING EAST FROM THE CENTRAL GALLERY, AUGUST 11, 1914. BY THIS DATE MICHIGAN NORTHERN HAD COMPLETED THE INSTALLATION OF GENERATORS IN THE EASTERN HALF OF THE POWER HOUSE AND HAD BEGUN WORK ON THE WEST. THE MOTOR-GENERATORS PURSHASED BY THE M.L.S.P.C. IN 1902 CAN BE SEEN ON THE LEFT BY THE LINE OF COLUMNS. (910)

MI-1-89 Photocopied August 1978.
POWER HOUSE, GENERATOR ROOM, VIEW LOOKING EAST FROM ABOUT THE CENTER, FEBRUARY 26, 1918, AFTER MICHIGAN NORTHERN HAD BROUGHT THE GENERATOR INSTALLATION UP TO FULL CAPACITY. THE NARROW PANEL WESTINGHOUSE SWITCHBOARD INSTALLED IN 1916-17 IS AT THE UPPER RIGHT. THE NEW GENERAL ELECTRIC GENERATORS ARE BELOW THE GALLERY. NOTE THE D.C. EXCITER UNIT ON EXTENDED SHAFT ON THE UNIT IN THE FOREGROUND. A SIMILAR TYPE OF INSTALLATION WAS FOUND AT PENSTOCKS 45 THROUGH 48 AND 62 THROUGH 73. WHAT SEEM TO BE EXTENDED SHAFT UNITS IN THE BACKGROUND ARE MERELY THE OLD STANLEY ALTERNATORS BEFORE THEY HAD BEEN REMOVED FROM THE GENERATOR ROOM. (878)

MI-1-90 Photocopied August 1978.
SWITCHBOARD AT CENTRAL GALLERY, SEPTEMBER 21, 1914. THE SLIM CONTROL PANELS (9 INCHES PER GENERATOR UNIT) BUILT BY WESTINGHOUSE FOR MICHIGAN NORTHERN TAKE CENTER STAGE. (912)

MI-1-91 Photocopied August 1978.
SWITCHBOARD AT CENTRAL GALLERY, FEBRUARY 9, 1914. (941)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-112 Photocopied August 1978.
DAMAGED ICE RACK, SEPTEMBER 27, 1917. THIS RACK, INSTALLED TO INTERCEPT FLOTAGE BEFORE IT COULD REACH THE TURBINES, WAS A CONSTANT HEADACHE. ITS RESISTANCE TO THE FLOW OF WATER COST THE COMPANY AROUND 0.2 FEET OF HEAD, AND WHEN LARGE AMOUNTS OF FLOTAGE DID ENTER THE CANAL, THE RACK WAS OFTEN SERIOUSLY DAMAGED. THE DAMAGE ILLUSTRATED HERE OCCURRED WHEN LARGE AMOUNTS OF PULP WOOD ENTERED THE CANAL IN 1916. THE PLANT WAS SHUT DOWN BRIEFLY IN 1917 TO REPAIR THE DAMAGE. (862)

MI-1-113 Photocopied August 1978.
LOMBARD GOVERNOR UNIT. DURING THE EXPANSION PROGRAM UNDERTAKEN BY THE MICHIGAN NORTHERN POWER COMPANY C. 1913 TO C. 1920 LOMBARD GOVERNORS WERE INSTALLED ON ALL OF THE TURBINES. PREVIOUSLY THERE HAD BEEN ONLY TWO OR THREE GOVERNORS IN THE ENTIRE PLANT. (898)

MI-1-114 Photocopied August 1978.
GOVERNOR PUMP UNIT NO. 5. (896)

MI-1-115 Photocopied August 1978.
NEW STEEL SHEET PILING AT PENSTOCK 26, FALL 1926. THE SILLS FOR THE NEW HORIZONTAL FOREBAY APRON ARE ALSO VISIBLE, AS IS THE NEW FOREBAY FLOOR PLANKING. JUST BEYOND THE NEW INTERLOCKING STEEL SHEET PILING IS THE TIMBER SHEET PILING PUT DOWN IN 1903 TO PREVENT WASHOUTS. (980)

MI-1-116 Photocopied August 1978.
NEW INTERLOCKING STEEL SHEET PILING AT PENSTOCK 52 IN THE FALL OF 1926. THE PILES FOR SUPPORTING THE HORIZONTAL ELEMENTS OF THE NEW FOREBAY APRON ARE IN PLACE BETWEEN THE NEW SHEET PILING AND THE FOREBAY WALL. VISIBLE BEYOND THE NEW SHEET PILING IS THE TIMBER SHEET PILING DRIVEN IN 1903 BY VON SCHON TO PREVENT WASHOUTS. (1006)

MI-1-117 Photocopied August 1978.
VIEW OF EAST FOREBAY SHOWING COMPLETED APRON. NOVEMBER 24, 1926. CLAY LEFT OVER FROM REFILLING THE AREA BETWEEN FOREBAY FLOOR SILLS IS SHOWN HEAPED AGAINST THE FOREBAY WALL TO PROVIDE AN EXTRA MEASURE OF PROTECTION. (1051)

MI-1-118 Photocopied August 1978.
UNION CARBIDE COMPANY, BUILDINGS PRIOR TO 1910. THE EXTREME EASTERN END OF THE HYDROELECTRIC POWER HOUSE CAN BE SEEN ON THE FAR LEFT. BEFORE C. 1915 TO 1920 THE LIME KILNS, PULVERIZERS, CRUSHERS, AND OTHER AUXILLIARY WORKS OF THE CARBIDE PLANT WERE

(continued)

MI-1-92 Photocopied August 1978.
RHEOSTATS AND OIL SWITCHES, IN PENSTOCK 30 AREA, LOOKING WEST, AUGUST 11, 1914. THE RHEOSTATS ANO OIL SWITCHES WERE REMOTELY CONTROLLED FROM THE SWITCHBOARO AND LOCATEO AT CONVENIENT POINTS ALONG THE GENERATOR ROOM GALLERY SO THAT THE CONTROL PANELS COULD BE BUILT AS SLIMLY AS POSSIBLE. (916)

MI-1-93 Photocopied August 1978.
VIEW OF REAR OF THE SWITCHBOARD, AUGUST 11, 1914, SHOWING BUS BARS. THE BUS BARS WERE MOVEO TO A POINT ABOVE THE SWITCHBOARO PANELS A FEW YEARS LATER. THE PLANT WAS EQUIPPEO WITH FOUR SETS OF BUS BARS, TWO FOR THE EAST ENO, TWO FOR THE WEST ENO, SO THAT ONLY A QUARTER OF THE PLANT COULD BE SHORTEO OUT AT ANY ONE TIME. (914)

MI-1-94* Photocopied August 1978.
THE FURNACE ROOM ON THE SECOND FLOOR OF THE POWER HOUSE AT SAULT STE. MARIE. THE ROWS OF ROTARY FURNACES SHOWN HERE WERE REPLACEO C. 1915-1920 BY 10,000 TO 20,000 H.P. TAPPING FURNACES. ONE TAPPING FURNACE WAS LOCATEO TO THE WEST OF THE ROW OF HORRY FURNACES, THE OTHER WAS LOCATEO IN A SEPARATE FURNACE HOUSE BUILT ON THE EAST OF THE POWER HOUSE. (E)

MI-1-95 Photocopied August 1978.
CRIBS BEING FLOATED INTO PLACE FOR THE CONSTRUCTION OF THE SECOND SET (NOS. 13-16) OF COMPENSATING GATES. NOTE THE ORIGINAL FOUR GATES IN THE BACKGROUND, MAY 14, 1915. (587)

MI-1-96 Photocopied August 1978.
COMPENSATING WORKS SITE (GATES 13-16) WITH COFFER DAM IN PLACE AND WORK SITE BEING PUMPED DRY FOR FOUNDATION WORK, JUNE 5, 1915. (596)

MI-1-97 Photocopied August 1978.
COMPENSATING GATES SITE, SEPTEMBER 7, 1915, LOOKING NORTH AT EAST END. THIS PHOTO GIVES A GOOD VIEW OF THE CONSTRUCTION OF THE COFFER DAM AS WELL AS THE COMPLETEO PIERS OF THE COMPENSATING GATES PRIOR TO THE INSTALLATION OF THE SUPER-STRUCTURE. (627)

MI-1-98 Photocopied August 1978.
COMPENSATING GATES 13-16, SEPTEMBER 27, 1915, AFTER ERECTION OF THE SUPER-STRUCTURE AS COFFER DAMS WERE BEING REMOVED FOR RELOCATION AT THE SITE OF GATES 9-12. (652)

MI-1-99 Photocopied August 1978.
COFFER OAM IN PLACE AND EXCAVATION WORK IN PROGRESS

(continued)

MI-1-99 AT THE SITE OF GATES 9-12, DECEMBER 4, 1915. THE FIRST FOUR COMPENSATING GATES ARE VISIBLE IN THE BACKGROUND. (652)

MI-1-100 Photocopied August 1978.
COMPENSATING GATES, VIEW LOOKING SOUTHWEST, JULY 8, 1916. COMPLETED GATES 13-16 ARE AT THE LEFT. THE PIERS OF GATES 9-12 ARE ON THE RIGHT. SUPERSTRUCTURE ERECTION ON THESE PIERS HAD NOT YET BEGUN. JUST ABOVE THE COFFER DAM, THE BREAKWATER INSTALLED TO PROTECT THE CONSTRUCTION SITE FROM THE RIVER CURRENT CAN BE SEEN. (684)

MI-1-101 Photocopied August 1978.
GENERAL VIEW OF COMPLETED COMPENSATING GATES LOOKING NORTHWEST, AUGUST 5, 1916. THE COMPLETED 8 AMERICAN GATES ARE IN THE CENTER OF THE PHOTO: THE FIRST 4 CANADIAN GATES ARE IN THE BACKGROUND AT THE RIGHT. GATES 5-8 HAVE NOT BEEN BUILT, NEITHER HAS THE DIKE CONNECTING GATE 16 (FAR LEFT) WITH THE DIKE OF THE GOVERNMENT HYDROELECTRIC PLANT HEAD RACE. THE BREAKWATER IN FRONT OF THE WORKS HAS NOT YET BEEN DREDGED OUT. (708)

MI-1-102* Photocopied August 1978.
VIEW OF ALL 16 GATES OF THE COMPENSATING WORKS FROM THE AMERICAN END, C. 1919-1920. THE DIKE CONNECTING GATE 16 (THE ONE CLOSEST TO THE VIEWER) TO THE GOVERNMENT HYDROELECTRIC PLANT HEAD RACE (WHERE THE PHOTOGRAPHER WAS STANDING) HAD NOT BEEN BUILT AT THIS POINT, LEAVING ONE SMALL SECTION OF THE ST. MARY'S OPEN. (948)

MI-1-103 Photocopied August 1978.
PREPARING TO CLOSE OFF THE LAST REMAINING OPEN SECTION OF THE ST. MARY'S RIVER AT SAULT STE. MARIE--THE COMPLETION OF THE DIKE JOINING THE COMPENSATING GATES TO THE U.S. GOVERNMENT DIKE IN AUGUST 1921. (728)

MI-1-104 Photocopied August 1978.
CYLINDER USED IN THE ERECTION OF THE INCLINED BUTTRESSES FOR POWER HOUSE REINFORCEMENT IN 1916. AN AIR LOCK WAS PLACED ON TOP OF THE CYLINDER: THE LOWER PORTION OF THE VERTICAL ELEMENT RESTED ON THE POWER HOUSE FOUNDATION APRON: THE INCLINED ELEMENT WAS CUT LEVEL WITH THE RIVER BED. THE INCLINED PORTION OF THE CYLINDER CONTAINED THE SHIELD USED TO BEGIN THE ERECTION OF THE SEGMENTED INCLINED CAST IRON BUTTRESSES. (764)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-105 Photocopied August 1978.
VIEW OF REINFORCEMENT WORK AT THE REAR OF THE POWER HOUSE, DECEMBER 11, 1916. SEVERAL WORKING CYLINDERS CAN BE SEEN IN PLACE, AS CAN SEVERAL OF THE FORMS WHICH WERE PREPARED FOR POURING CONCRETE TO EXTEND THE TAIL RACE WALLS OVER ALREADY INSTALLED REINFORCEMENT BUTTRESSES. (779)

MI-1-106 Photocopied August 1978.
EXTENSION OF TAIL PIT WALLS, APRIL 28, 1917. THE TIMBERWORK IN THE FOREGROUND WAS USED AS A COMBINATION COFFER DAM AND FORM FOR POURING THE CONCRETE TAIL RACE WALL EXTENSION. IN THE BACKGROUND ALONG THE POWER HOUSE SEVERAL COMPLETED WALL EXTENSIONS CAN BE SEEN DIMLY. (787)

MI-1-107 Photocopied August 1978.
CONSTRUCTING THE LOADING BRIDGE ON THE NORTH SIDE OF THE POWER HOUSE, JULY 16, 1917. A NUMBER OF THE EXTENDED TAIL RACE WALLS WITHOUT CONCRETE FORMS ARE CLEARLY VISIBLE IN THE BACKGROUND. (788)

MI-1-108 Photocopied August 1978.
NORTH SIDE OF THE POWER HOUSE, AUGUST 29, 1917, AFTER THE LAST ARCH OF THE CONCRETE ARCH LOADING BRIDGE HAD BEEN POURED AND THE FORMS REMOVED. TO ADD MORE WEIGHT TO THE BRIDGE GRAVEL WAS PLACED IN THE AREA BETWEEN THE ARCHES. (791)

MI-1-109 Photocopied August 1978.
CANAL WALL REPAIR WORK, OCTOBER 4, 1916. THE SAME COMPANY (THE FOUNDATION COMPANY) WHICH PLACED THE BUTTRESSES AT THE REAR OF THE POWER HOUSE ALSO MADE EXTENSIVE WALL REPAIRS FOR MICHIGAN NORTHERN. A PORTION OF THE MASONRY RETAINING WALL IN THE ROCK SECTION OF THE POWER CANAL IS BEING RECONSTRUCTED HERE.(816)

MI-1-110 Photocopied August 1978.
REPAIRED SIDE WALL, NORTH SIDE, EAST OF RAILROAD BRIDGE, SEPTEMBER 27, 1917, SHOWING THE POURED CONCRETE WALL WHICH REPLACED THE EARLIER MASONRY AND STONE WALLS. MUCH OF THE MATERIAL WHICH HAD SLID INTO THE CANAL WAS NOT REMOVED UNTIL 1926. (839)

MI-1-111 Photocopied August 1978.
FOREBAY AND POWER HOUSE FROM WEST FOREBAY EMBANKMENT, 1920 OR LATER. NOTICE THAT A GOOD PORTION OF THE GRATING OF THE ICE AND TRASH RACK HAS BEEN REMOVED FOR THE WINTER. ICE TENDED TO FORM ON THE RACK, CLOGGING IT UP AND INHIBITING THE FLOW. THE UNION CARBIDE PLANT IS VISIBLE ON THE FAR RIGHT. (881)

(continued)

Michigan Lake Superior Plant and Canal - (continued)

MI-1-118 Photocopied August 1978.
LOCATED ON THE GROUNDS TO THE EAST OF THE POWER HOUSE WHILE THE FURNACES WERE PLACED ON THE SECOND FLOOR OF THE POWER HOUSE. EVENTUALLY ALL FURNACES WERE MOVED TO THE AREA TO THE EAST OF THE POWER HOUSE ANO THE UPPER FLOORS OF THE POWER HOUSE WERE USED PRIMARILY FOR STORAGE AND CARBIOE COOLING ALONE. (508)

MI-1-119 Photocopied August 1978.
GENERAL VIEW OF THE POWER HOUSE AND THE UNION CARBIDE COMPANY FROM THE RIVER. C. 1910. (547)

MI-1-120 Photocopied August 1978.
POWER HOUSE, C. 1920. FROM THE WEST. THE UNION CARBIDE PLANT IS ON THE EXTREME RIGHT OF THE PHOTOGRAPH. (883)

MI-1-121 Jet Lowe, Photographer, July 1978.
POWER CANAL, GENERAL VIEW NORTH.

MI-1-122 Jet Lowe, Photographer, July 1978.
POWER CANAL LOOKING NORTH. WOODEN LINING OF CANAL STILL VISIBLE NEXT TO ROCKS.

MI-1-123 Jet Lowe, Photographer, July 1978.
POWER CANAL SHOWING ROCK SECTION.

MI-1-124 Jet Lowe, Photographer, July 1978.
BRIDGE CROSSING POWER CANAL, GENERAL VIEW, NORTHEAST.

MI-1-125 Jet Lowe, Photographer, July 1978.
POWER HOUSE FROM TOWER OF HISTORY, GENERAL VIEW SOUTHEAST.

MI-1-126 Jet Lowe, Photographer, July 1978.
EAST FACADE POWER HOUSE BUILDING. NOTE POWER LINES AT LEFT.

MI-1-127 Jet Lowe, Photographer, July 1978.
WEST SIDE OF POWER HOUSE SHOWING FOREBAY AREA.

MI-1-128 Jet Lowe, Photographer, July 1978.
GENERAL VIEW NORTH FROM CENTER OF POWERHOUSE, FACTORY LEVEL.

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Michigan Lake Superior Plant and Canal -(continued)

MI-1-129 Jet Lowe, Photographer, July 1978.
MONITORING EQUIPMENT, CENTER OF POWERHOUSE.

MI-1-130 Jet Lowe, Photographer, July, 1978.
GENERATOR ROOM FROM CENTER OF BUILOING, LOOKING NORTH.

MI-1-131 Jet Lowe, Photographer, July 1978.
GENERAL VIEW EAST, SHOWING RAILROAD BRIDGE ANO HEAOGATE OAM.

MI-1-132 Jet Lowe, Photographer, July 1978.
GENERAL VIEW NORTH OF HEADGATES TO POWER CANAL, FROM RAILROAD BRIOGE.

MI-1-133 Jet Lowe, Photographer, July 1978.
HEAOGATES JUST ABOVE ST. MARY'S RIVER RAPIOS. GENERAL VIEW NORTH.

MI-1-134 Jet Lowe, Photographer, July 1978.
NORTH SIDE OF HEADGATES, TO POWER CANAL.

MI-1-135 Jet Lowe, Photographer, July 1978.
GENERAL VIEW NORTH OF HEADGATES OF POWER CANAL, FROM ROADWAY BRIOGE INTO TOWN.

MI-1-136 Jet Lowe, Photographer, July 1978.
HEADGATE GEARS LOOKING EAST. CANADIAN STEEL PLANT IN BACKGROUNO.

MI-1-137 Jet Lowe, Photographer, July 1978.
WATER TURBINE OPEN FOR REPAIR OF BLAOES.

MI-1-138 Jet Lowe, Photographer, July 1978.
GENERAL VIEW NORTH FROM CORPS OF ENGINEERS POWERHOUSE OVERLOOKING ST. MARY'S RAPIDS.

MI-1-139 Jet Lowe, Photographer, July 1978.
TRASH COLLECTORS AT MOUTH OF POWER CANAL.

MI-1-140 Jet Lowe, Photographer, July 1978.
BASCULE BRIDGE.

MI-1-141 Photocopied August 1978.
GENERAL VIEW OF COMPENSATING GATES, JANUARY 5, 1918(?). (724)

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HISTORIC AMERICAN ENGINEERING RECORD

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ADDENDUM TO
MICHIGAN LAKE SUPERIOR POWER COMPANY,
HYDROELECTRIC PLANT AND CANAL
Portage Street
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Chippewa County
Michigan

HAER No. MI-1

MI-1-1 through MI-1-141 were transmitted to the Library of Congress.

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All color xeroxes were made from a duplicate color transparency.

Jet Lowe, Photographer, July 1978

MI-1-142 (CT) POWERHOUSE FROM TOWER OF HISTORY, GENERAL VIEW SOUTHEAST

MI-1-143 (CT) EAST FACADE OF POWERHOUSE BUILOING